



United States Patent [19]

Wick et al.

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- [54] **TRANSDERMAL PATCH INCORPORATING
A POLYMER FILM INCORPORATED WITH
AN ACTIVE AGENT**

5,126,144 6/1992 Jaeger 424/448

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Related U.S. Application Data

- [60] Continuation-in-part of application No. 08/477,042, Jun. 7, 1995, Pat. No. 5,679,373, which is a division of application No. 08/426,492, Apr. 20, 1995, Pat. No. 5,662,926, which is a continuation of application No. 07/861,534, Apr. 1, 1992, abandoned, and a continuation-in-part of application No. 08/477,312, Jun. 7, 1995, Pat. No. 5,676,969.

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| [51] | Int. Cl. ⁷ | A61F 13/02 |
| [52] | U.S. Cl. | 424/448; 424/449; 427/2.31 |
| [58] | Field of Search | 424/448, 449;
427/2.31 |

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[57] **ABSTRACT**

Devices for the controlled release of an active agent to the skin or mucosa of a host are disclosed, which devices are laminates of a backing layer and a monolithic carrier layer formed from a melt blend of an active ingredient with a thermoplastic matrix polymer without first dissolving or suspending the polymer or active ingredient in a solvent therefor, so that the carrier layer is substantially free of residual solvent, wherein the thermoplastic matrix polymer has a melt temperature between about 170° C. and about 200° C. and is selected from polyether block amides, ethylene methacrylic acid copolymers, ethylene acrylic acid copolymers, copolymers of polyether prepolymers with polybutylene terephthalate, copolymers of polyether prepolymers with polyisobutylene terephthalate and polyether polyurethanes, the active ingredient is heat stable at the melt temperature of the matrix polymer and is selected from active agents, active agent enhancers and mixtures thereof, and the laminate is provided with means for affixing the laminate to the skin or mucosa of the host so that the active ingredient is continuously released from the carrier layer thereto. Methods for assembling the device are also disclosed.

74 Claims, 7 Drawing Sheets

